

Community Energy Webinar

25 May 2022

Structure of Webinar

- **Rossendale's Net Zero ambitions** - Joe Walker (RBC Climate Change Officer)
- **What does Community Energy look like?** - Kate Gilmartin (North West Net Zero Hub/Lancashire County Council)
- **Information about Valley Heritage's Decarbonising Rossendale project** - Stephen Anderson (VH) and Phil Proctor (Buro Happold)
- **Community Energy Company** - Ollie Pendered (Community Energy South)
- **Q and A and update about drop-in sessions and training**

Rossendale Borough Council & The Net Zero Strategy

Joe Walker – Climate Change Officer, Rossendale Borough Council

An aerial photograph of Rossendale, showing a dense residential area with many houses, interspersed with green fields and trees. In the background, rolling hills are visible under a blue sky with some clouds. The town is situated in a valley, with hills rising on either side.

Rossendale
BOROUGH COUNCIL

2020-2030 CLIMATE CHANGE

Strategy

Net Zero Strategy

- The Council set a target to be Net Zero by 2030.
- Includes being a Net Zero organisation by the same date.
- Carbon Reduction Fund ring-fenced to achieve this target.
- The Council has solar arrays on 3 of our buildings, which help to cut our emissions and generate income through the government's Feed-In-Tariff.
- Further investigations to identify areas where renewables and other technologies are suitable for lowering energy demand and carbon emissions.
- Included renewable energy within the Local Plan and will be included within the Supplementary Planning Document.

Why do we need community energy?

- We cannot achieve our Net Zero ambitions without the people of Rossendale.
- In 2020, the Council emitted 2,054 tonnes of CO₂.
- This contributes 0.59% of the total CO₂ emissions in the Borough.
- So we must work together in order to generate more energy locally.

Contact details

- climatechange@rossendalebc.gov.uk



Westmill solar co-op

Rossendale, Community energy and low carbon, resilient communities.

Kate Gilmartin: Community Energy Investment Lead, Local Energy Hub North West
My role is to support communities to bring forward potential projects;

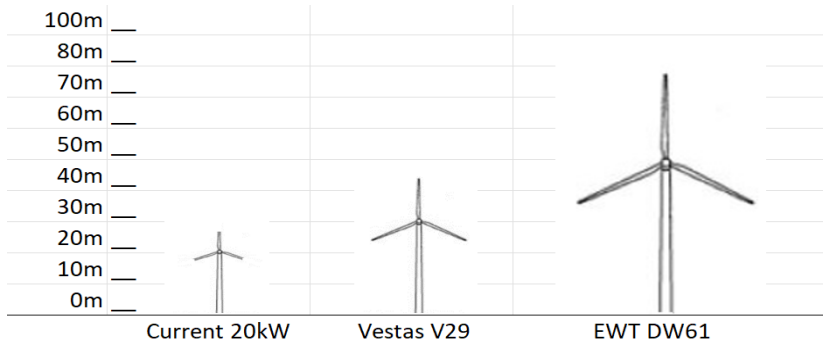
What is a Low Carbon Community?

- **Renewable energy** :— Generating our own electricity locally
- **Low carbon heat** :— Heat pumps/ heat networks
- **Housing** :— Make our homes more energy efficient (spend less & save CO₂)
- **Travel and transport**:- Electric Vehicle charge points/ car clubs / public transport requirements
- **Resilience**:- Flooding or other climate shocks

Why is community level action so important?

- Collective action will be cheaper, faster and more effective.
- We need localised energy solutions.
- Community action leads to collaboration, networks and knowledge transfer.
- Communities can become resilient to flooding and extreme weather.
- A just and equitable Net Zero transition
- Community Wealth Building - £81m leaves Rossendale economy in energy spend

Community Wind



Southport Eco Centre

Replacing a 20kW defunct wind turbine with 1MW

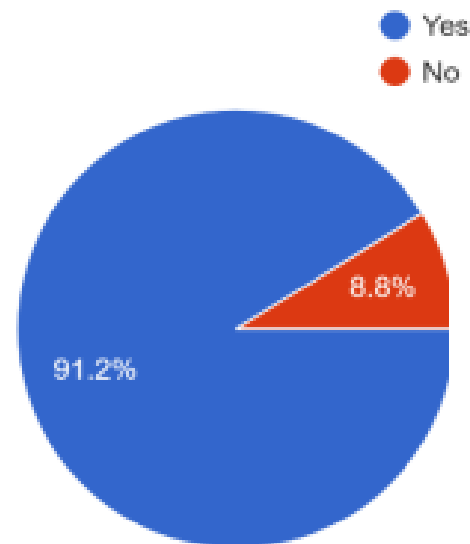
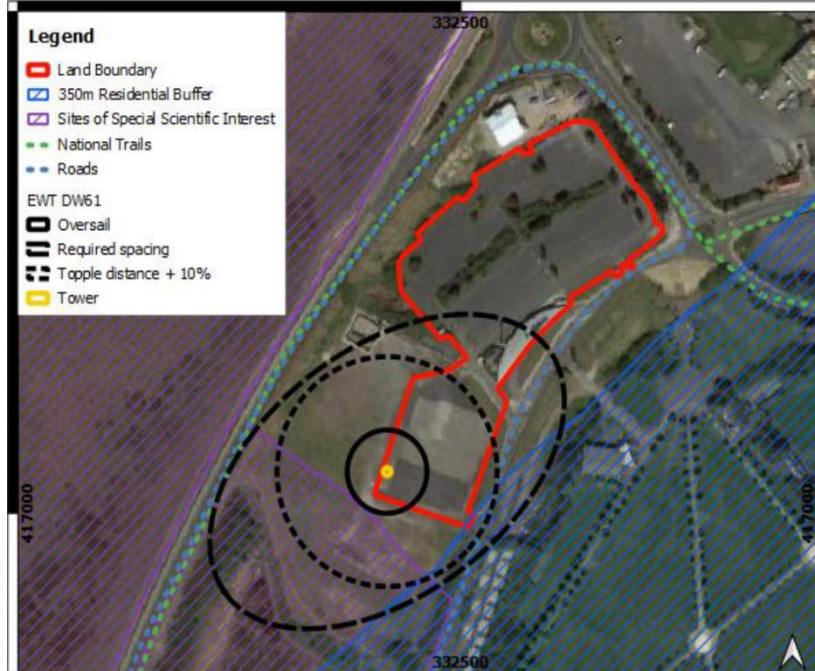
Ecology and bird surveys

Community consultation positive

Draft land lease with Sefton Borough Council

Selling all electricity to the Dunes Leisure centre and Splash world

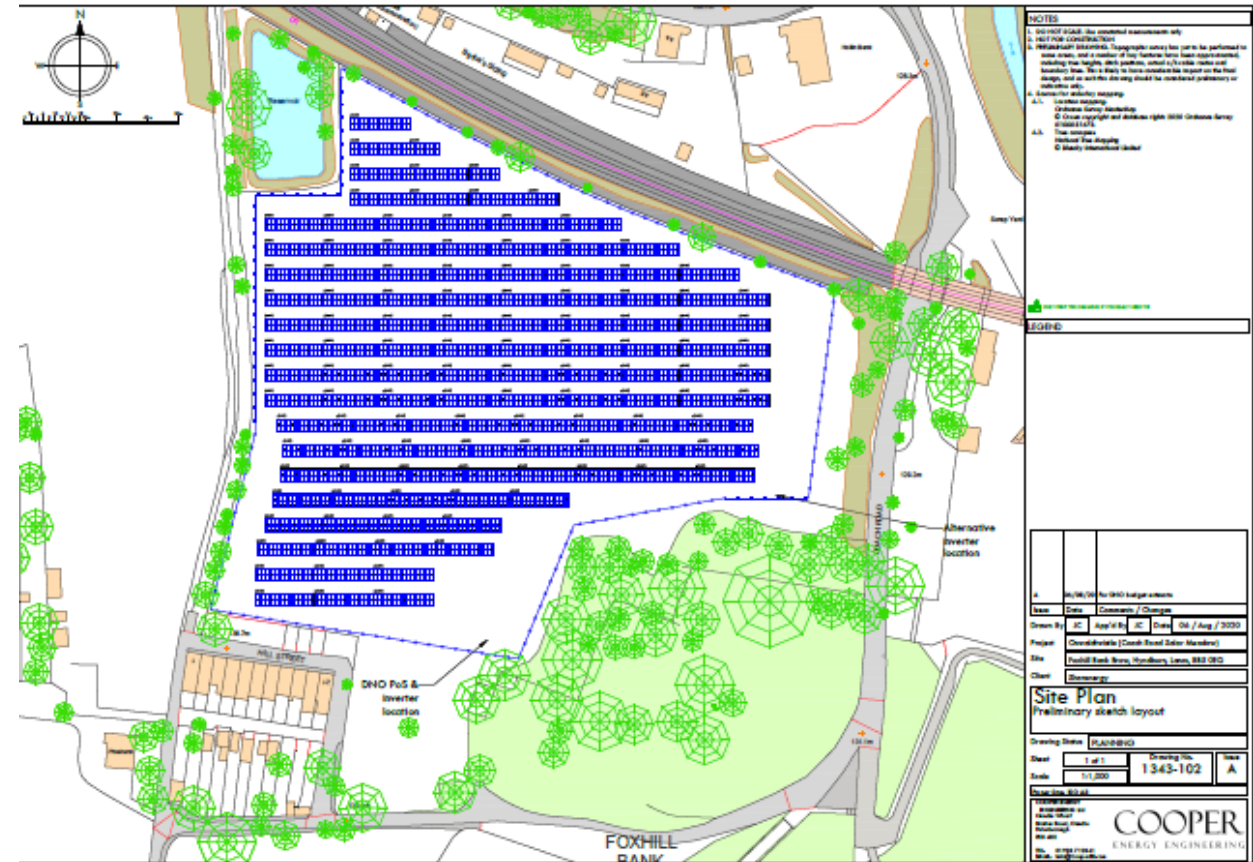
Community Benefit Fund ~£100k pa



Solar Meadow:

Accrington: 2MW ground mounted solar
(tucked away, unused 4 acres of land),
Selling ~60% electricity generated
to a local factory.

Working towards Planning submission



Congleton Hydro

<https://vimeo.com/644635695/f54aa9a24e>



- 65kW Hydro scheme on Havannah Weir
- Electricity cabled to the Siemens Manufacturer
- Local people invested in scheme for 3% return
- Small Community Benefit Fund for community projects



Chipping Village:

Currently on oil

What are the low carbon solutions?

Ground Source bore holes providing low temperature heat for clusters of homes and small heat pump in each home





Derwent Valley
Car Club
RUN BY THE COMMUNITY, FOR THE COMMUNITY

CLEANER

**COMMUNITY BASED RURAL CAR CLUB
IN BLACKHALL MILL, ROWLANDS GILL & SHOTLEY BRIDGE**

- * A convenient, flexible option for driving
- * Quick and easy online booking system
- * No worries about insurance, servicing or costly repair bills
- * Members can save around £3,500 per annum compared to running your own car
- * An environmentally friendly option that saves money and reduces impact on the environment

Established in January 2014

EV car clubs with Volunteer driver scheme

Conclusion

- Community energy empowers people to engage in low carbon action.
- Delivers local assets, democratisation of energy and community benefit.
- Additional value... social impact, fuel poverty alleviation, trusted messengers...
- Community action networks have the ability to mobilise and be resilient.
- Community wealth building – local revenue generating assets
- Low carbon ripple effect!
- ‘working with’, rather than ‘doing to’

Thank you – Questions?

Get in touch with any ideas, or further advice:

- Kate.Gilmartin@lancashire.gov.uk





Introduction

- Who are Valley Heritage?
- Decarbonising Rossendale
Introduction

Community Energy Webinar



Who are Valley Heritage?

- A Heritage Development Trust
- A registered charity
- Aspire to re-use redundant heritage assets across the area for uses which benefit the community
- Five volunteer Trustees
- Lots of amazing volunteers!
- Brought £1.2 million of funding into Rossendale since 2019

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VALLEY HERITAGE



Decarbonising Rossendale

- Funded through Community Renewal Fund
- Sustainability project focusing on:
 - Skills development for local tradespeople and property professionals
 - Advice to homeowners
 - Establishing Rossendale Valley Energy



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Decarbonising Rossendale

- Feasibility study looking at opportunities for the community energy company
- Evaluation of the air source heat pump installation at the former Lancashire & Yorkshire Bank

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Skills Development

- Targeted at local tradespeople and property professionals
- Recognises that tradespeople are often first point of contact for property improvements
- Understanding Domestic Retrofit training course
- Events planned for the summer
- Resources on our website

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VALLEY LEY
HERITAGE



Advice to Homeowners

- Events over the summer
- Resources on our website
- Sharing information from our air source heat pump installation

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VALLEY LEY
HERITAGE



Bacup

Rossendale Valley Energy

- A new community renewable energy company
- Will be established by the project
- Project will develop potential projects to be taken forwards
- Enabling the community to take greater ownership of its energy needs

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VALLEY HERITAGE



Low Carbon Demonstrator

- Air Source Heat Pumps being installed as part of Lancashire & Yorkshire Bank project
- Decarbonising Rossendale project funding equipment to monitor and evaluate ASHP performance
- Results will be shared to inform anyone looking at similar technologies

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website: www.rvenergy.org.uk

Rossendale Valley Energy needs you!
Interested? Send us an email / message in the
chat with contact details!



Community Energy Webinar



Decarbonising Rossendale

A community led approach

25th May 2022

Our approach

Evaluating the best options for the community

- We use real building data collected from residents combined with publicly available data
- We combine this with infrastructure data such as electricity network data from Electricity North West
- We use our digital modelling capability to assess:
 - Possible options for solar and wind generation locally
 - What options there are for providing heat into homes
 - Any electric vehicle charging requirements?
 - Any efficiency options for residents to reduce energy consumption
- We look at different cost and commercial models to determine the possible price for energy to residents and income to community energy organisations
- We develop possible energy road maps

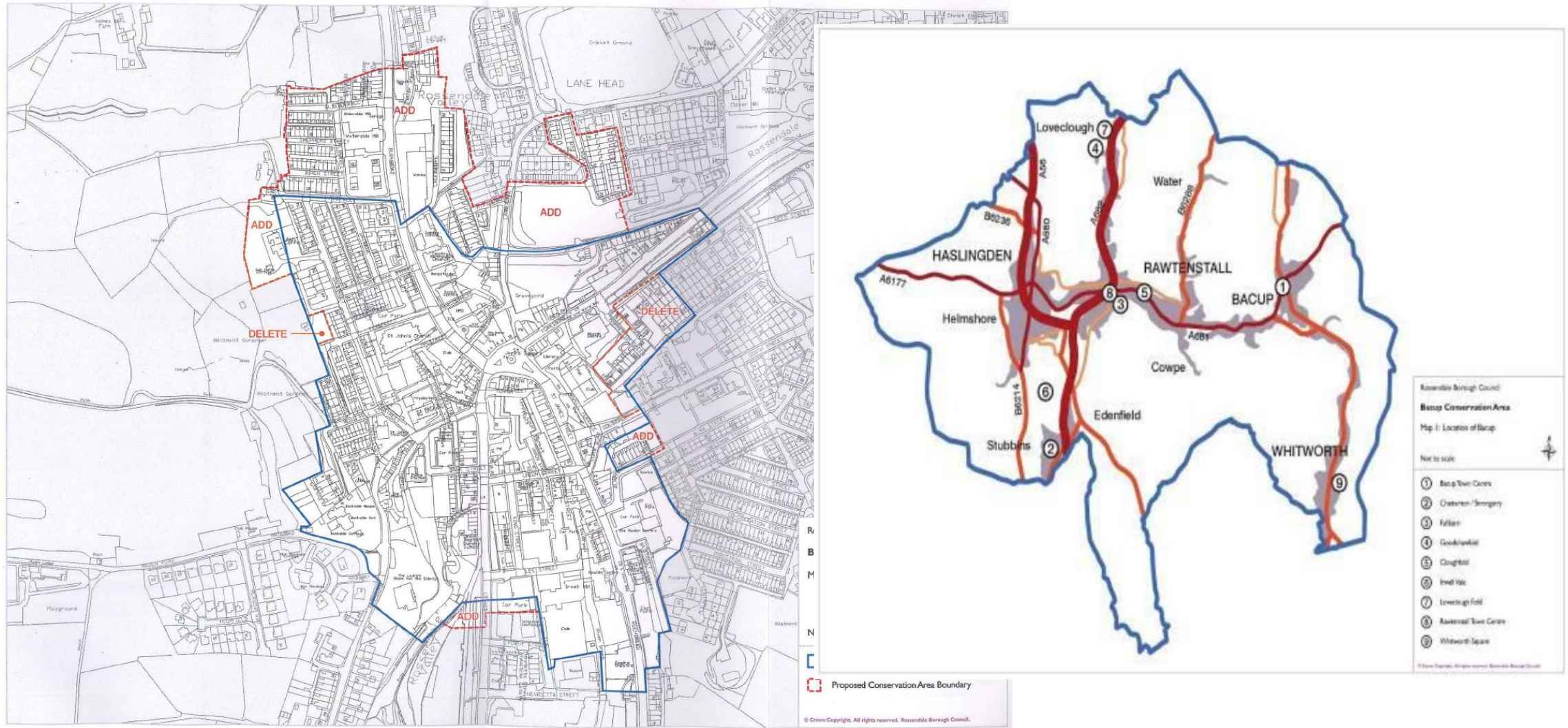
Direct engagement with the community is key to success!



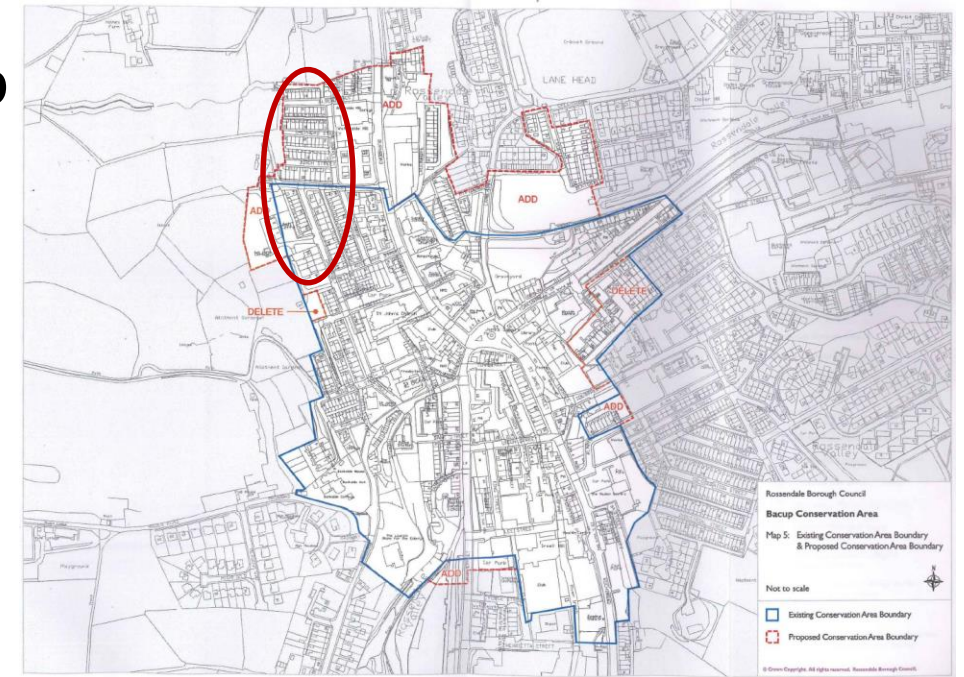
www.communiheat.org

Terraced Housing

Bacup Town Centre Conservation Area
Rossendale District
Lancashire, England



Location: Terrace streets, off Alder St, Bacup

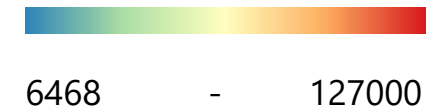


- Terrace street, off Alder Street, in proposed addition to Town Centre Conservation area
- Listed (grade II) Mill as Energy Center or Plant room

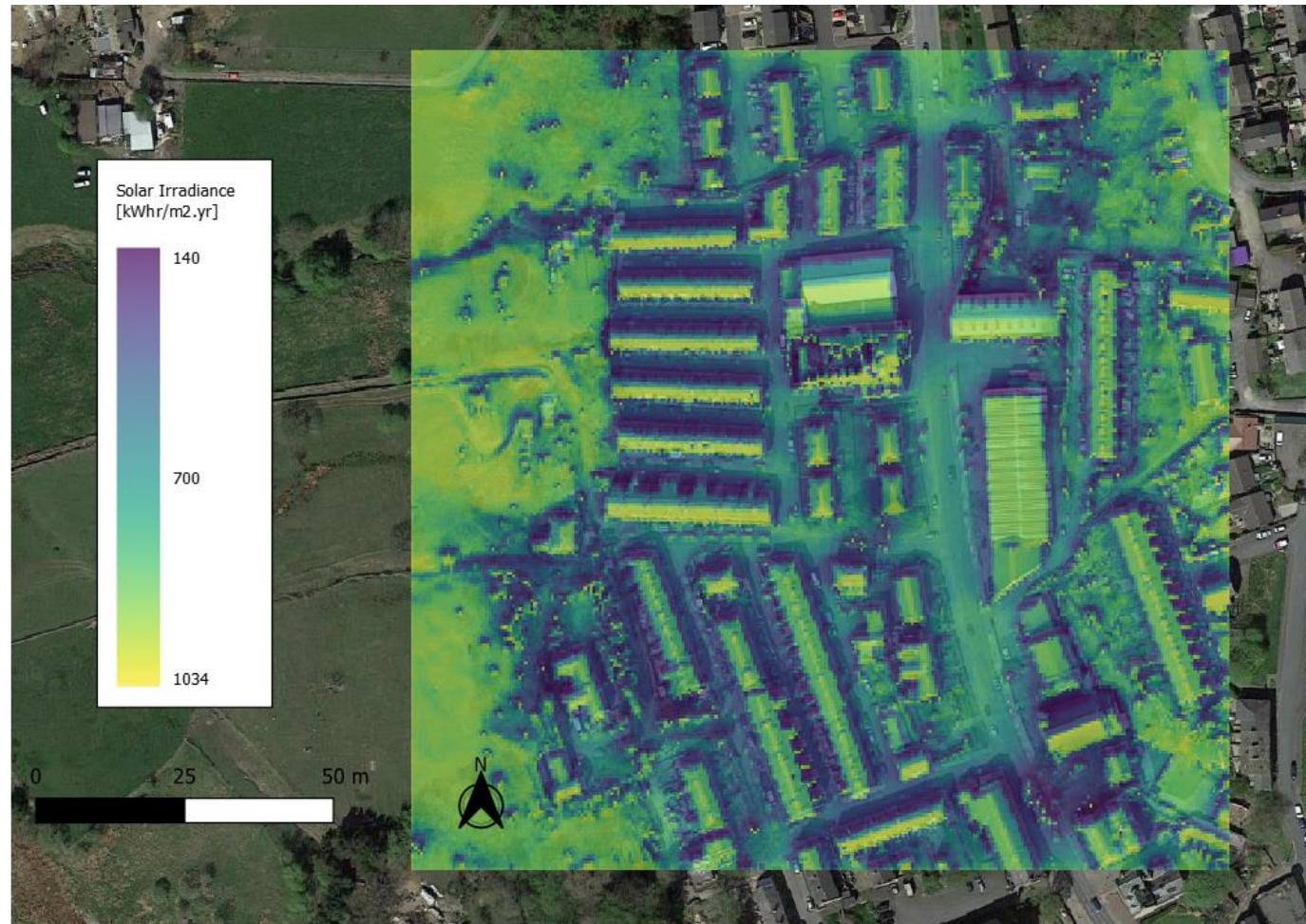
Heat Demand: Terrace streets, off Alder St, Bacup



- Heat mapping based off Domestic EPCs and Non-Domestic EPCs
- Gradient heat map displaying annual heat consumption (kWh/yr)



Solar Irradiance Assessment



- Assessment of solar irradiance options based on roof orientation
- Shadowing assessment to determine system options
- Yield calculations (daily and annual kWh) are put into our models to determine cost and payback of roof top solar

The value of doing this



Outcomes of the project

- Roadmaps tailored to the specific area showing options for:
 - Low carbon heat
 - Low carbon transport
 - Renewable generation
- Community models developed to deliver direct local value to residents including;
 - **Lower energy bills** than could be achieved otherwise with clear sight of costs and **price stability**
 - **Community participation** in energy options and benefits which may otherwise be unaffordable
 - **Quality information to support decision making** for residents clearly explaining choices they can make tailored to their needs

Example advisory pack options

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Example commercial model – Energy Local

- <https://energylocal.org.uk/>
- 1. Households and small scale renewable generators as members form an Energy Local Club (ELC) - legally a Coop.
- 2. Households have smart energy meters installed to show when and how much power they were using.
- 3. Members (households and generators) agree a price ("match tariff") that will be paid to the generator when they match their electricity use to when electricity is generated locally, for example, turning their washing machine on when they know the local Hydro scheme is working at full pelt.
- 4. The Club chooses a partner energy supplier (such as Octopus Energy) that sells the extra power they need when there is not enough local electricity generated. The supplier sends each household the bill for their total power use.

BURO HAPPOLD

Thankyou

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Community Energy Pathways For Rossendale

Creating a thriving community
led support for communities to
transition to Net Zero

Ollie Pendered

CEO Community Energy South

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About Community Energy

Powering Up

Community Renewable Energy

Community Solar

Retrofitting

Hydro/Batteries

Community heat networks

EV Charging/EV Car Sharing

Solar schools

**Harnessing community
finance**



Powering Down

Energy awareness

Fuel poverty support

Home energy visits

Trusted impartial advice

**Enabling community
resilience**

About Community Energy

**Community-led
Energy Plan**

**Keeping electricity
prices low**

**Transition from fossil
fuels to Renewable
Power**

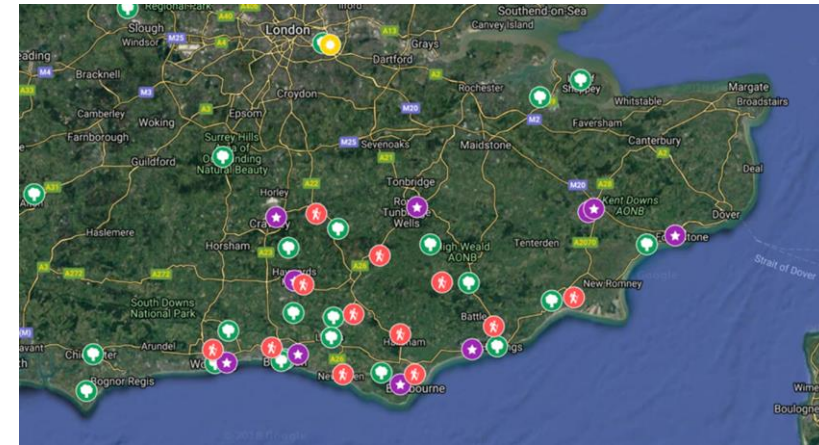
**Long Term
Community
Resilience**





Community Energy Pathways 2020

Community Energy Examples



Community Energy Sector in 2020



Community Energy Organisations

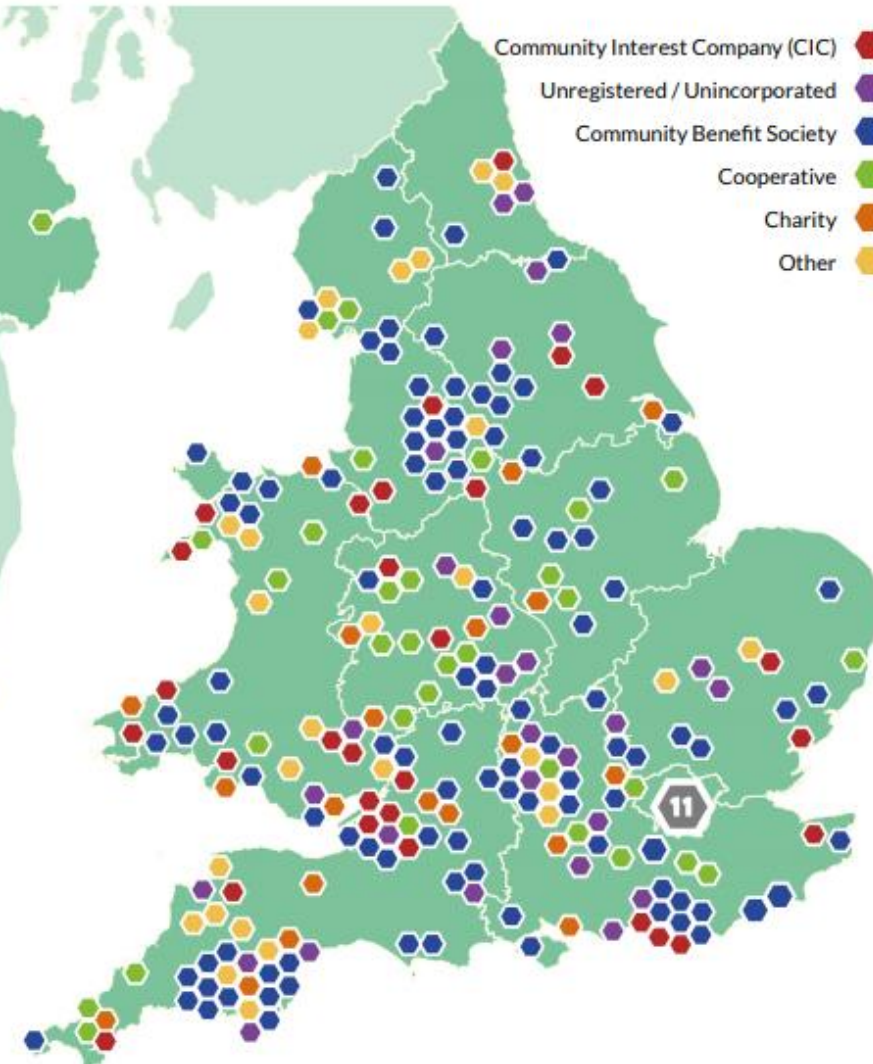
England, Wales and Northern Ireland



Community
Energy
England

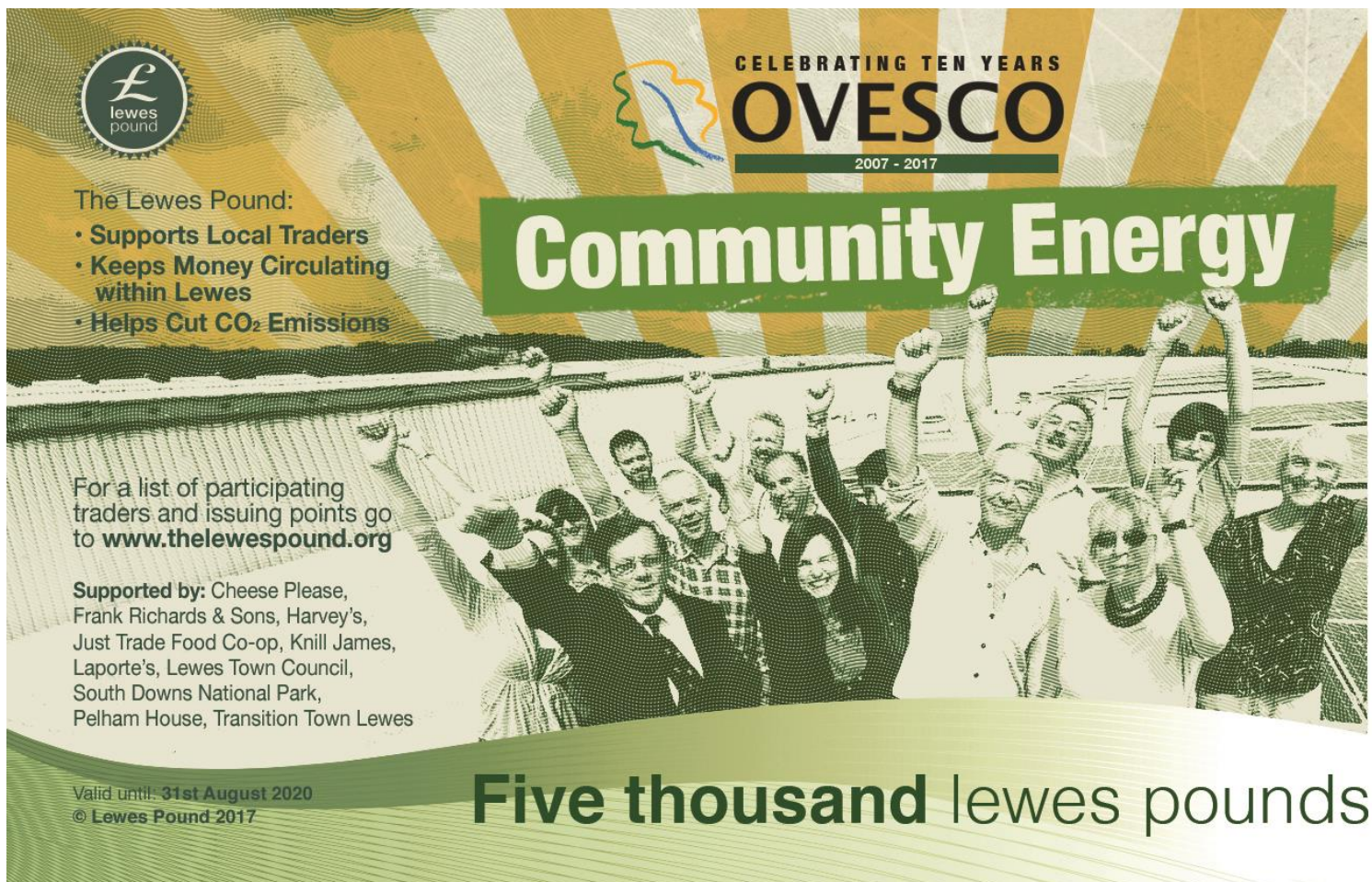
Cymunedol Cymru
Community Energy

SCENE



Community
Energy
England

Innovation Solar –Electric Vehicles – Charging -
Schools - Community Heat – Microgrids – Fuel Poverty
- Policy



The Lewes Pound:

- Supports Local Traders
- Keeps Money Circulating within Lewes
- Helps Cut CO₂ Emissions

For a list of participating traders and issuing points go to www.thelewespond.org

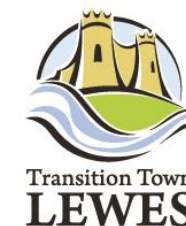
Supported by: Cheese Please, Frank Richards & Sons, Harvey's, Just Trade Food Co-op, Knill James, Laporte's, Lewes Town Council, South Downs National Park, Pelham House, Transition Town Lewes

Valid until: 31st August 2020
© Lewes Pound 2017

CELEBRATING TEN YEARS
OVESCO
2007 - 2017

Community Energy

Five thousand lewes pounds



- 80% of village uses kerosene heating – move everyone to air source
- Hydro project at Barcombe Mills
- 2 Rural District Heat studies
- 5MW solar farm feasibility
- AD Project report
- Wind project report
- Offset energy usage of village MW PV (Barcombe Reservoir)
- EV transition plan
- Free (Community) rural electric bus
- Plan to transition to bikes
- **Community Bond – low interest loan fund**



Barcombe Net Zero Carbon Rural Community

This project is supported by

CommuniHeat

Pathway to Net Zero

1. Surveying the village to find out how much energy the village uses to heat and power
2. Map the future to show the whole village using electric heating
3. Simulate the village and see where the grid needs upgrade which is ultimately paid for by the public (our electricity bills)
4. How can these future costs be reduced through innovation
5. Develop new ways to allow rural communities to reduce carbon **emissions** by switching to low carbon electric heat and transport
6. Allow for more renewable generation on the local network

•This project provides a framework for the Parish which will inform the electricity network reinforcement requirements and a plan to facilitate the community to transition to Net Zero

CommuniHeat

PATHWAY TO NET ZERO



CommuniHeat –

Roadmap and Digital Twin

CommuniHeat
PATHWAY TO NET ZERO

CommuniHeat: to develop the roadmap which aims to understand how rural communities can switch to low-carbon heating using electricity in a way that ensure future comfort, affordability and a smooth transition.



What type of project is right for your community?

High energy users



High profile energy users



Rural or urban?

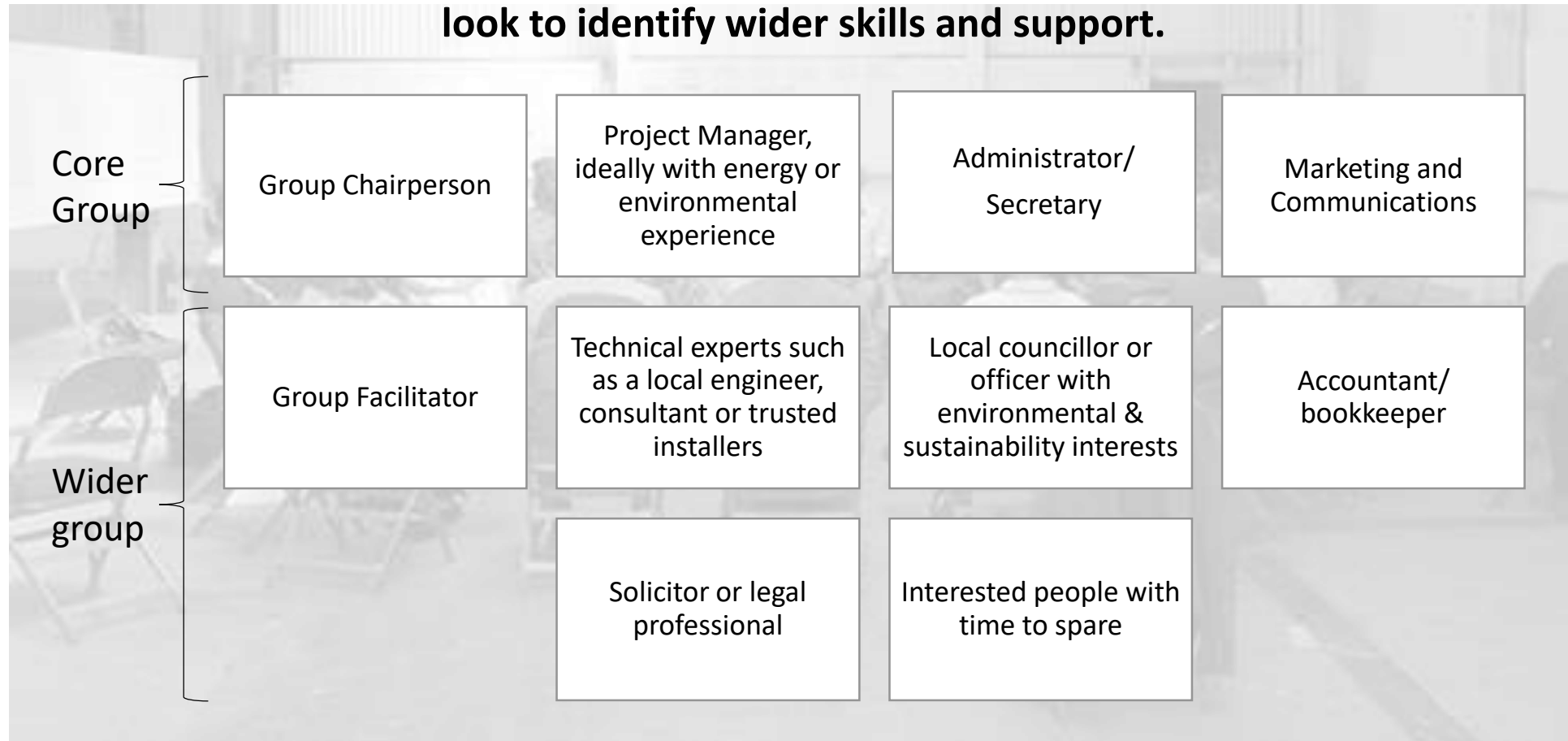


Fuel Poverty and energy advice

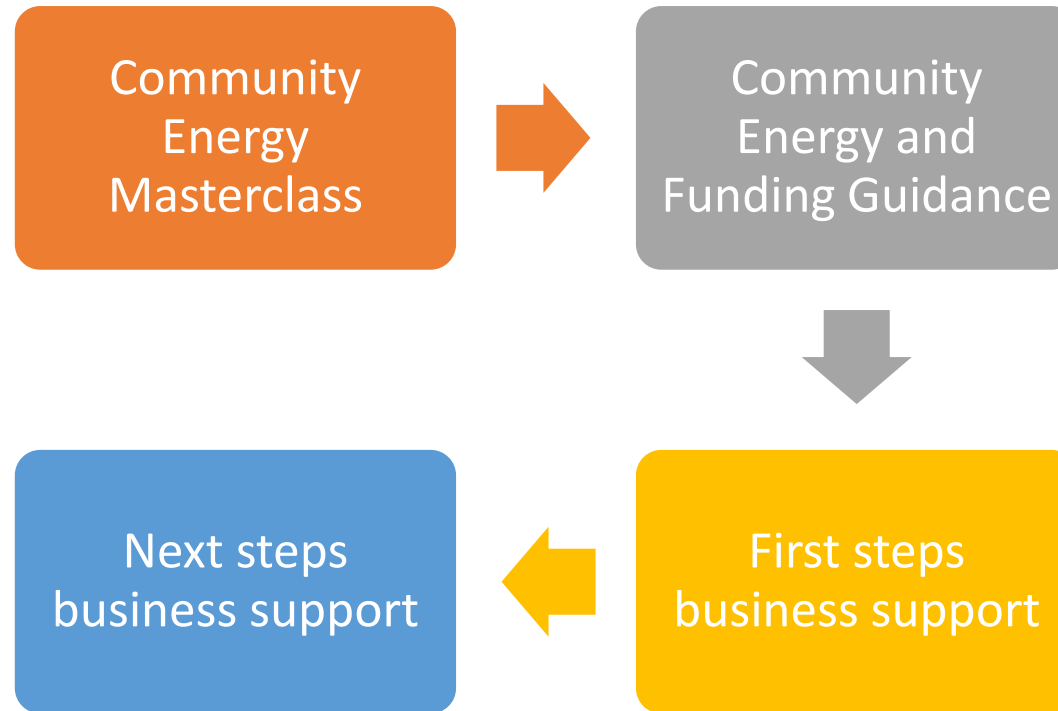
Create a core group

Don't go it alone!

**Start by creating a small, core group and
look to identify wider skills and support.**



What support is available to start a community energy project?



Community Energy Pathways For Rossendale

Creating a thriving community
led support for communities to
transition to Net Zero

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CEO Community Energy South

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Info regarding drop-in sessions & Q&A

- Survey to be sent out to all those who attended today. Please leave your details if you're interested in any of the drop-in sessions.
- Please feel free to ask any questions either in the chat or unmute yourself.